Amendments to the Claims

This listing of the claims will replace all prior versions, and listing of claims in the application. All amendments are made without prejudice.

1. (Currently amended) A method for collapsing microbubbles, ~~characterized in that, in the step of~~ the microbubbles having a diameter of 50 μm or less and floating ~~floated~~ in a solution and decreasing gradually in size by natural dissolution of the gas contained in the microbubbles ~~and disappearing finally~~, the method comprising ~~the microbubbles are disappeared by~~ accelerating a ~~the~~ speed of ~~the~~ microbubble size decrease and disappearance by applying a stimulation to the microbubbles, wherein a great amount of free radical species are released from a gas-liquid interface by increasing a charge density at the gas-liquid interface of the microbubbles.

2. (Original) The method according to Claim 1, wherein the microbubbles form an ultrahigh-pressure ultrahigh-temperature region inside in an adiabatic compression-like change of the microbubbles caused by decrease of the microbubbles size.

3. (Cancelled)

4. (Currently amended) The method according to Claim 1, wherein free radical species comprising ~~such as~~ active oxygen species for decomposition of ~~the~~ substances present inside the microbubbles or in ~~the~~ an area surrounding the micro bubbles are generated by collapsing the microbubbles.

5. (Currently amended) The method according to Claim 1, wherein the method gives rise to a compositional change of ~~the~~ chemical substances dissolved or floated in the solution.

6. (Currently amended) The method according to Claim 1, wherein the method sterilizes ~~microorganisms such as~~ microbes, viruses, and other microorganisms ~~others~~ present in the solution.

7. (Withdrawn) The method according to Claim 1, wherein the stimulation is electric discharge in a container containing a microbubble-containing solution generated by using a discharger.

8. (Withdrawn) The method according to Claim 1, wherein the stimulation is ultrasonic wave irradiated into a container containing a microbubble-containing solution by an ultrasonicator.

9. (Withdrawn) The method according to Claim 8, wherein the ultrasonicator is connected to the container between a microbubble-containing solution outlet port of a microbubble generator connected to container and an intake of the microbubble generator and the stimulation is given by continuous irradiation of ultrasonic wave into the container by the ultrasonicator.

10. (Currently amended) The method according to Claim 1, wherein~~, when a circulation pipe is connected to a container containing a microbubble-containing solution,~~ the stimulation is compression, expansion and swirling current generated by circulating part of ~~the~~ a microbubble-containing solution in ~~the~~ a container connecting a circulation pipe by ~~the~~ a circulation pump and making the solution path through an orifice plate or porous plate having a single or multiple holes installed in the circulation pipe.

11. (Currently amended) The method according to Claim 10, wherein the circulation pump gives a positive pressure of 0.1 MPa or more to ~~the~~ a discharge side.

12. (Currently amended) The method according to Claim 10, wherein the circulation pump gives a negative pressure lower than ~~the~~ an environmental pressure to ~~the~~ an intake side.

13. (Currently amended) The method according to Claim 1, wherein~~, when a circulation pipe is connected to the container containing a microbubble-containing solution,~~ the stimulation is compression, expansion and swirling current generated by feeding ~~the~~ a microbubble-containing solution in ~~the~~ a container connecting a circulation pipe into the circulation pipe and making the solution path through an orifice plate or porous plate having a single or multiple holes installed in the circulation pipe.

14. (Withdrawn) The method according to Claim 1, wherein the stimulation is forcibly internal circulation, in the pipe for feeding the microbubble-containing solution generated by a microbubble generator to a container, of making the microbubble-containing solution discharged from the microbubble generator pass through a punching plate installed in the pipe, taken in part of the microbubble-containing solution from an intake installed between the punching plate and the

container and feeding it into a pump, feeding the microbubble-containing solution into the pump, discharging it ~~form~~ from an outlet port installed between the microbubble generator and the punching plate, and making it pass through the punching plate once again.

15. (Withdrawn) The method according to Claim 14, wherein, the pump gives a positive pressure of 0.1 MPa or more to the discharge side.

16. (Withdrawn) The method according to Claim 14, wherein the pump gives a negative pressure lower than the environmental pressure in the upstream pipe.

17. (Withdrawn) The method according to Claim 1, wherein, when the gas contained in the microbubbles is ozone, the stimulation is the radical chain reaction occurring at the -liquid interface associated with decomposition of the ozone.

18. (Canceled)